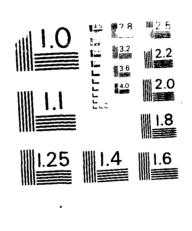
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ANNUAL SUMMARY REPORT

August 1986 - August 1987

RESEARCH AS PART OF THE AIR FORCE RESEARCH IN AERO PROPULSION TECHNOLOGY (AFRAPT) PROGRAM

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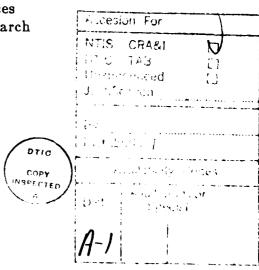
Sanford Fleeter

August 1987

Thermal Sciences and Propulsion Center School of Mechanical Engineering Purdue University West Lafayette, Indiana 47907

Prepared For

Directorate of Aerospace Sciences Air Force Office of Scientific Research



The status of the seven students participating in the Air Force Research in Aero Propulsion Technology (AFRAPT) program during the 1986-87 academic year is shown below.

James Eley

Thesis Advisor:

Professor Sanford Fleeter

Research Topic:

Unsteady Flow Generated Structural Dynamic

Blade Response

Company Affiliation:

Pratt & Whitney - South

Current Status:

Mr. Eley has completed most of his M.S.M.E.

course work and has initiated his thesis research.

Gregory Hebert

Thesis Advisor:

Professor William G. Tiederman

Research Topic:

Turbine Vane Endwall-Corner Boundary Layer

Experiments

Company Affiliation:

Allison Gas Turbines

Current Status:

Mr. Hebert has completed approximately 50% of his M.S.M.E. course work and has

initiated his thesis research.

Gregory Henderson

Thesis Advisor:

Professor Sanford Fleeter

Research Topic:

Unsteady Aerodyamic Performance of

Turbomachine Blade Rows

Company Affiliation:

General Electric - Evendale

Current Status:

Mr. Henderson has successfully passed all Ph.D qualifying exams, approximately 70% of his Ph.D. coursework, and has initiated

his thesis research.

Douglas Morgan

Thesis Advisor:

Professor John Sullivan

Research Topic:

TO THE SECRECAL PROPERTY OF THE PROPERTY OF TH

Combustor Swirling Flow and Cross Jet

Interaction Experiments

Company Affiliation:

General Electric - Evendale

Current Status:

Mr. Morgan has completed his M.S.M.E.

course work and has initiated his experimental thesis research program.

Joseph Neal

Thesis Advisor:

Professor Sanford Fleeter

Research Topic:

Three-Dimensional Aerodynamics of Axial

Flow Turbomachines

Company Affiliation:

General Electric - Lynn

Current Status:

Mr. Neal has completed the experiments

and data acquisition, with the data

analysis currently in progress.

Jeffrey Whitlow

Thesis Advisor:

Professor Arthur H. Lefebvre

Research Topic:

Fuel Thermal Stability

Company Affiliation:

Pratt & Whitney - South

Current Status:

Mr. Whitlow has completed most of his M.S.M.E. course work and has initiated his

thesis research.

James Wolff

Thesis Advisor:

Professor Sanford Fleeter

Research Topic:

Unsteady Viscous Flow Prediction

Company Affiliation:

Garrett Turbine Engine Company

Current Status:

Mr. Wolff has completed his M.S.M.E.

course work and has initiated his thesis reearch.

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